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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/747,848	12/29/2003	David Tseng	S63.2N-14166-US03	6431
499 7590 12/09/2009 VIDAS, ARRETT & STEINKRAUS, P.A. SUITE 400, 6640 SHADY OAK ROAD EDEN PRAIRIE, MN 55344				
EXAMINER STROUD, JONATHAN R				
ART UNIT		PAPER NUMBER		
3774				
MAIL DATE		DELIVERY MODE		
12/09/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/747,848

**Applicant(s)**

TSENG ET AL.

**Examiner**

JONATHAN STROUD

**Art Unit**

3774

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) 3, 17 and 25-28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-16, 18-24 and 29-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

Due to the omission of claims 34 and 35 in the final action rejection, the finality of that office action is rescinded and this action is filed as its replacement. This action is now final.

### ***Response to Arguments***

1. Applicant's arguments filed 05/13/2009 have been fully considered but they are not persuasive.
2. With regards to claims 1, 6, 8 and 32, applicant argues that a "direct connection between a linear portion of the first strut that lies side by side with a linear portion of the second strut" is not anticipated by Kanesaka.
3. However, portions 18, as well as all of the portions connecting elements 10, are direct connections between linear portions of struts that lie side by side. The direct connection can include a bridge or curved element, and the elements clearly lie side by side to each other longitudinally.
4. With regards to independent claim 24, applicant argues that there is no teaching in Kanesaka that teaches a helical spacing of once approximately every 430 degrees.
5. However, as is well shown in fig. 6 and as explained somewhat in the specification, the connection element 29 is distributed once every full turn plus one "peak" or connection. Since there are eight "peaks", each peak comprises 45 degrees of a winding. So, one full winding plus one peak would generally be equal to approximately 415 degrees. Furthermore, applicant has indicated "approximately every 430 degrees".

6. Furthermore, another claimed element discloses 450 degrees, a 20 degree difference. It would seem that, by applicant's own claimed language, a difference of less than 20 can be considered insignificant.
7. With regards to claim 5, the reasoning and logic above applies; furthermore, claim 5 is rejected with regards to the case law that indicates that changes in values absent some convincing proof of their significance would be obvious to one of ordinary skill in the art. Here, none has been given in the response. Hence, the above logic applies.
8. With regards to claims 2, 4, and 29-31, and claim 7, and claims 9-13, and claim 23, they are not substantially addressed beyond their dependency upon other claims.
9. Applicant's arguments with respect to claims 14, 16 and 22 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 102***

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

1. Claims 1, 6, 8, 15, 24, 32 and 34-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanesaka 5,810,872.

FIG. 1

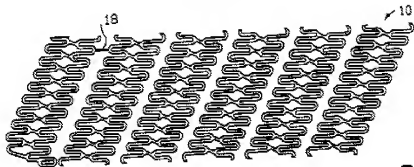
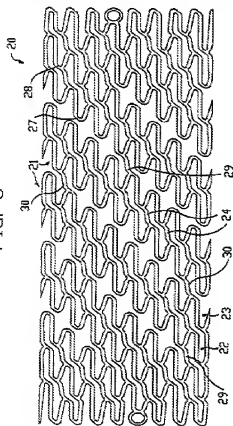


FIG. 6



Re claims 1, 6, 8, 15, 22, 24, 32, 34 and 35, Kanesaka teaches an intraluminal stent comprising a plurality of hoops disposed in helical succession, clearly seen in figs. 6 and 1 recreated here, each of said hoops defined by a single continuous filament that

defines a helical arrangement of elements defined by a successive series of substantially straight struts, again, clearly shown in figs. 1 and 6, elements 21, connected by apex sections, elements 27, alternately pointing in opposite axial directions, even more clearly defined in fig. 1., at least one connecting member 18 or 29 which can be adapted to do anything; a direct connection, where 19 or 29 are directly connected to the stent area struts, and a separate bridging member actual length of element 18 or 29. Hoops are seen in fig. 6 as are end hoops, which have elements that are perpendicular to the circumference and parallel to the axis of the stent. This also clearly reflects a zig-zag pattern with alternating apex sections.

***Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 2, 4, 5, 7, 9-13, 18-21, 23, and 29-31 are rejected under 35 U.S.C. 103(a) as being unpatentable Kanesaka 5,810,872.

Re claims 2, 4, 5, 7, 9-14, 16, 18-21, 23, and 29-31, Kanesaka generally teaches the stent as described above and provides a number of embodiments listed which encompass many of the slight changes in length, frequency, shape or orientation of the

strut or stent elements; further, it has been held that changes in shape and size, the duplication of parts, or the experimentation within known parameters are all obvious to one of ordinary skill in the art at the time of invention.

See 2144.04 C, Making Separable, In re Dulberg, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961), Making Integral In re Larson, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965), Making Continuous, In re Dilnot, 319 F.2d 188, 138 USPQ 248 (CCPA 1963), Duplication of Parts, In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960), Rearrangement of Parts, In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950). All have been held obvious to one of ordinary skill in the art.

Claims 14, 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable Kanesaka 5,810,872, further in view of Becker 6,117,165.

Kanesaka teaches the device as claimed and discussed above.

Re claims 14 and 16, Kanesaka fails to explicitly show the stent wherein adjacent circumferential hoops are engaged by at least one connector whose first end is parallel to and extends from a substantially straight strut of a first circumferential hoop and a second end of the at least one connector being parallel to and extending from a substantially straight strut of a second circumferential hoop.

Becker teaches such a connector and hoop configuration, 33, where the connector is an H-shaped device which extends to straight elements which are part of the stent, where the connectors are parallel to the other connectors and the struts they extend from.

Re claim 22, Kanesaka fails to explicitly show end hoops whose end apexes lie in a common plane perpendicular to the axis of the stent.

Becker shows such a stent, fig. 5.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify Kanesaka, further in view of Becker, in order to further improve flexibility while maintaining hoop strength, to provide steady and uniform endings to prevent tissue abrasion and have a predictable location of the stent for surgeons to implant it in vivo; and to create a smooth ending for stent to avoid snags upon delivery.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See references cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN STROUD whose telephone number is (571)270-3070. The examiner can normally be reached on 8-4, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Isabella can be reached on 571-272-4749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William H. Matthews/  
Primary Examiner, Art Unit 3774

/Jonathan R Stroud/  
Examiner, Art Unit 3774